



MindTech Display Co., LTD.

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## **MTDis Product Specification**

**Model Name: M141NWW1-101**

**Issue date: 2007/06/05**

<b>Product Development and Customer Engineering Division</b>	<b>Customer</b>
<i>Calo</i> 2007/7/3	

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## 1.0 GENERAL DESCRIPTIONS

### 1.1 Introduction

The M1410NWW1 is a color active matrix thin film transistor (TFT) liquid crystal display (LCD) that uses amorphous silicon TFT as a switching device. It is composed of a TFT LCD panel, a timing controller, voltage reference, common voltage, driver DC-DC converter, column driver, and row driver circuit. This TFT LCD has a 14.1-inch diagonally measured active display area with WXGA resolution (1280 vertical by 800 horizontal pixel array).

### 1.2 Features

- 14.1" WXGA TFT LCD Panel
- 1 CCFL Backlight System
- Supported WXGA (V:1280 lines, H:800 pixels) resolution
- Compatible with RoHS Standard
- VESA Compliant

### 1.3 Product Summary

Items	Specifications	Unit
Screen Diagonal	14.1 inch Diagonal	Inch
Active Area	303.36(H) x 189.6(V)	mm
Pixels H x V	1,280 (x3) x 800	
Pixel Pitch	0.237×0.237	mm
Pixel Arrangement	R.G.B. Vertical Stripe	
Display Mode	Normally White	
White Luminance	200 typical	cd/ m <sup>2</sup> (CCFL current 6.0mA)
Contrast Ratio	350 : 1 typical	
Response Time	10 typical	msec
Input Voltage	+3.3 typical	V
Power Consumption	5.4W	Watt
Weight	395 maximum	g
Outline Dimension	320.0(H) × 206.0(V) × 5.5(T) Max	mm
Electrical Interface (Logic)	LVDS	
Support Color	262 K	
Optimum Viewing Direction	6 o'clock	
Surface Treatment	Glare + HC	
Screw torque value	2 (max)	kgf.cm

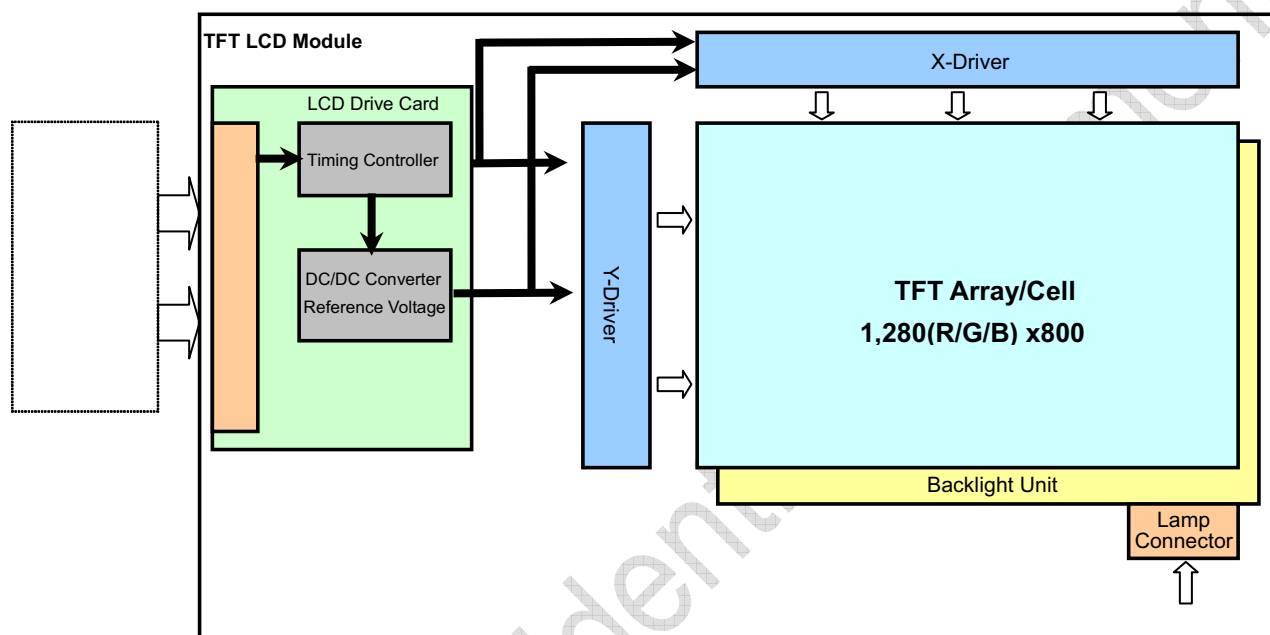
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## 1.4 Functional Block Diagram

**Figure 1** shows the functional block diagram of the LCD module.

**Figure 1 Block Diagram**





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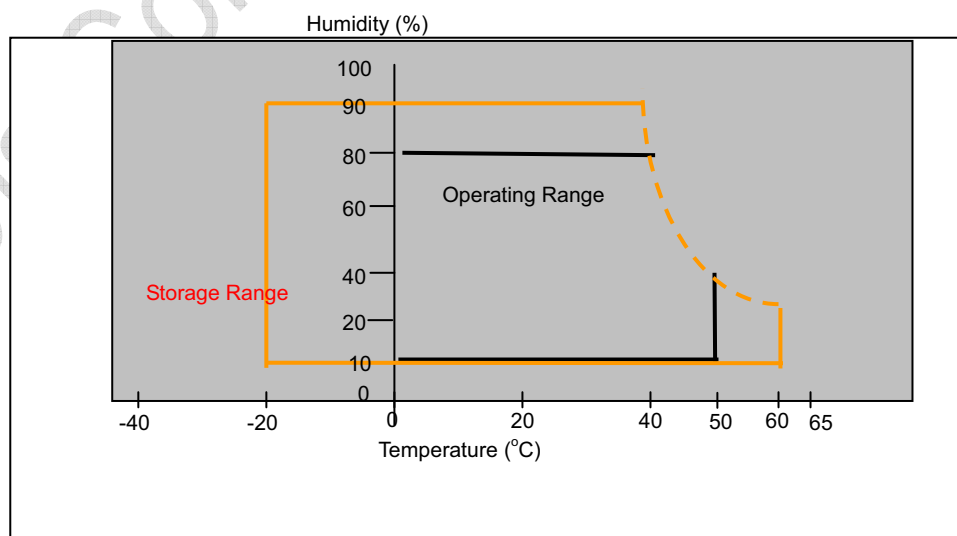
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### 2.0 Absolute Maximum Ratings

Item	Symbol	Min	Max	Unit	Conditions
Supply Voltage	VDD	-0.5	4.0	V	
Input Signal		-0.5	2.6	V	LVDS signals
Operating Temperature	TOP	0	50	deg. C	(Note)
Operating Humidity	HOP	--	80	%RH	(Note)
Storage Temperature	TST	-20	60	deg. C	(Note)
Storage Humidity	HST	--	90	%RH	at Ta < 40°C, No condensation.
Vibration	--	--	1.5G 10-500Hz	G Hz	30min for X, Y, Z axis
Shock	--	--	220G 2ms	G ms	Half sign wave
CCFL Current	ICCFL	--	6	mArms	

Note (1)Storage /Operating temperature. Maximum Wet-Bulb should be 39 degree C.  
No condensation.

(2)When you apply the LCD module for OA system. Please make sure to keep the temperature of LCD module is less than 60°C



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### 3.0 Pixel Format Image

**Figure 2** shows the relationship of the input signals and LCD pixel format image.

### Figure 2 Pixel Format

	1	2	3	4													1279	1280											
1	R	G	B	R	G	B	R	G	B	R	G	B	...	...	...	...	...	...	...	...	...	...	...	R	G	B	R	G	B
2	R	G	B	R	G	B	R	G	B	R	G	B	...	...	...	...	...	...	...	...	...	...	...	R	G	B	R	G	B
3	R	G	B	R	G	B	R	G	B	R	G	B	...	...	...	...	...	...	...	...	...	...	...	R	G	B	R	G	B
	:	:	:	:	:	:	:	:	:	:	:	:												:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:												:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:												:	:	:	:	:	:
799	R	G	B	R	G	B	R	G	B	R	G	B	...	...	...	...	...	...	...	...	...	...	...	R	G	B	R	G	B
800	R	G	B	R	G	B	R	G	B	R	G	B	...	...	...	...	...	...	...	...	...	...	...	R	G	B	R	G	B



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## 4.0 Optical Characteristics

The optical characteristics are measured under stable conditions as following notes

**Table 1 Optical characteristics**

Item	Conditions		Specification			
			Min	Typ.	Max	Note
Viewing Angle [degrees] K=Contrast Ratio>10	Horizontal	Left	40	45	--	A, B
		Right	40	45	--	
	Vertical	Up	15	20	--	
		Down	40	45	--	
Contrast ratio	Center		--	350	--	A, C
Response Time [ms]	Rising + Falling		--	10	20	A, D
Color Chromaticity (CIE1931)	Red	x	0.557	0.587	0.617	A,
	Red	y	0.314	0.344	0.374	A,
	Green	x	0.282	0.312	0.342	A,
	Green	y	0.538	0.568	0.598	A,
	Blue	x	0.126	0.156	0.186	A,
	Blue	y	0.096	0.126	0.156	A,
	White	x	0.283	0.313	0.343	A,
	White	y	0.299	0.329	0.359	A,
White Luminance [cd/m^2]	ICCFL=6.0mA		150	200		5point A, E
Luminance Uniformity	ICCFL=6.0mA, 13points		55	65	--	A, F
	ICCFL=6.0mA, 5points		75	85		

Note: A. Measurement Setup:

The LCD module should be stabilized at given temperature for 20 minutes to avoid abrupt temperature change during measuring. In order to stabilize the luminance, the measurement should be executed after lighting backlight for 20 minutes in a windless room.

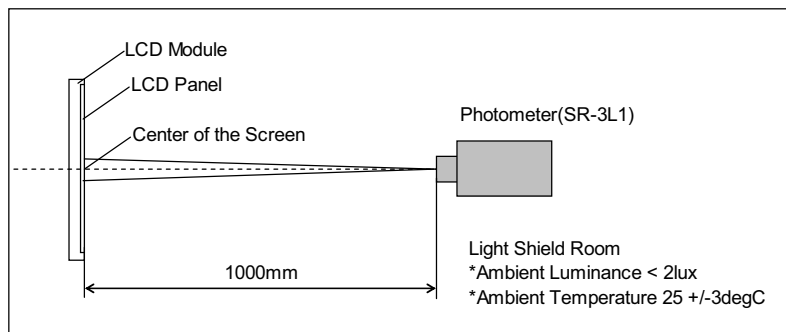




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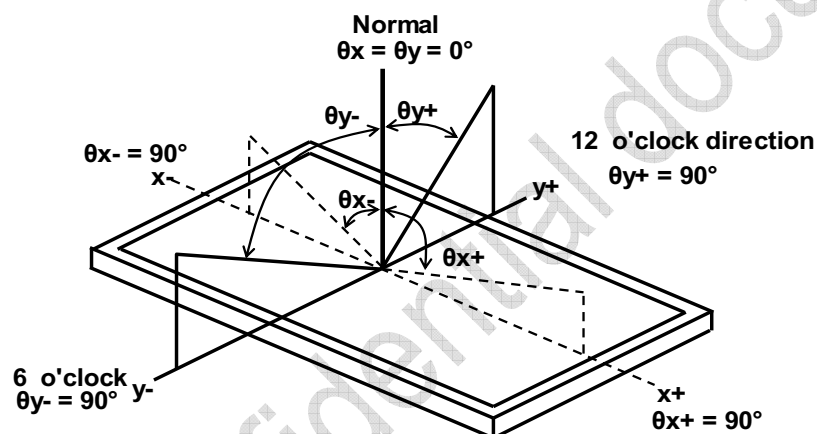
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**Figure 3 Measurement Setup**



### B. Definition of Viewing Angle

**Figure 4 Definition of Viewing Angle**



### C. Definition of Contrast Ratio (CR)

The contrast ratio can be calculated by the following expression

$$\text{Contrast Ratio (CR)} = L_{63} / L_0$$

L63: Luminance of gray level 63, L0: Luminance of gray level 0

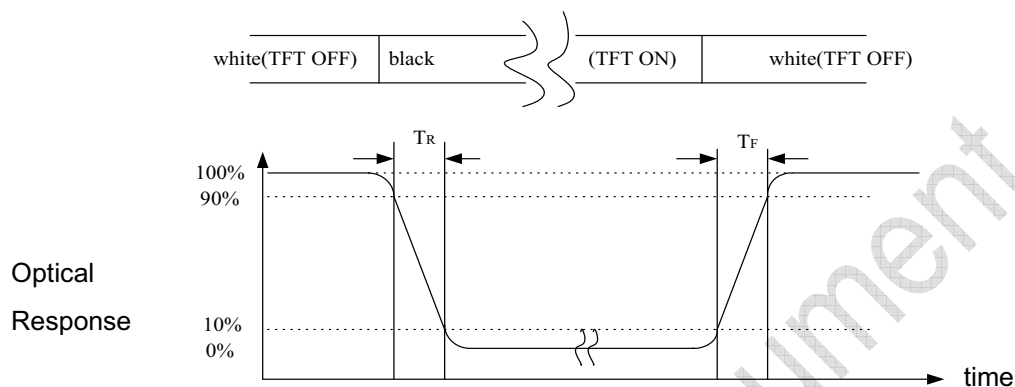


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### D. Definition of Response Time ( $T_R$ , $T_F$ )

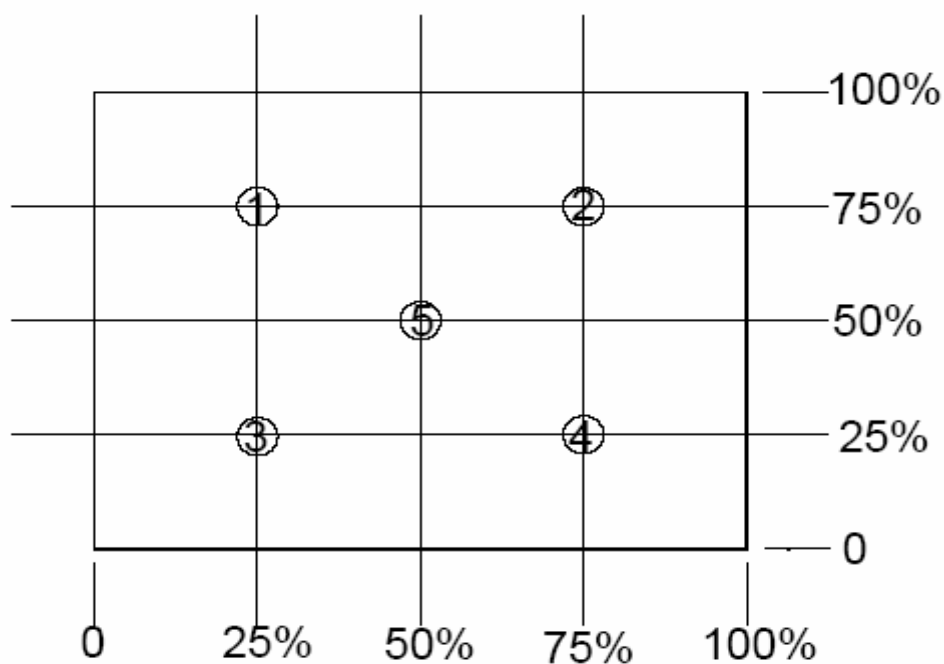
**Figure 5 Definition of Response Time**



### E. Definition of Luminance White

Measure the luminance of gray level 63 at center point

$$\text{Display Luminance} = \frac{1 + 2 + 3 + 4 + 5}{5}$$



**Screen Luminance Measurement Points (5)**



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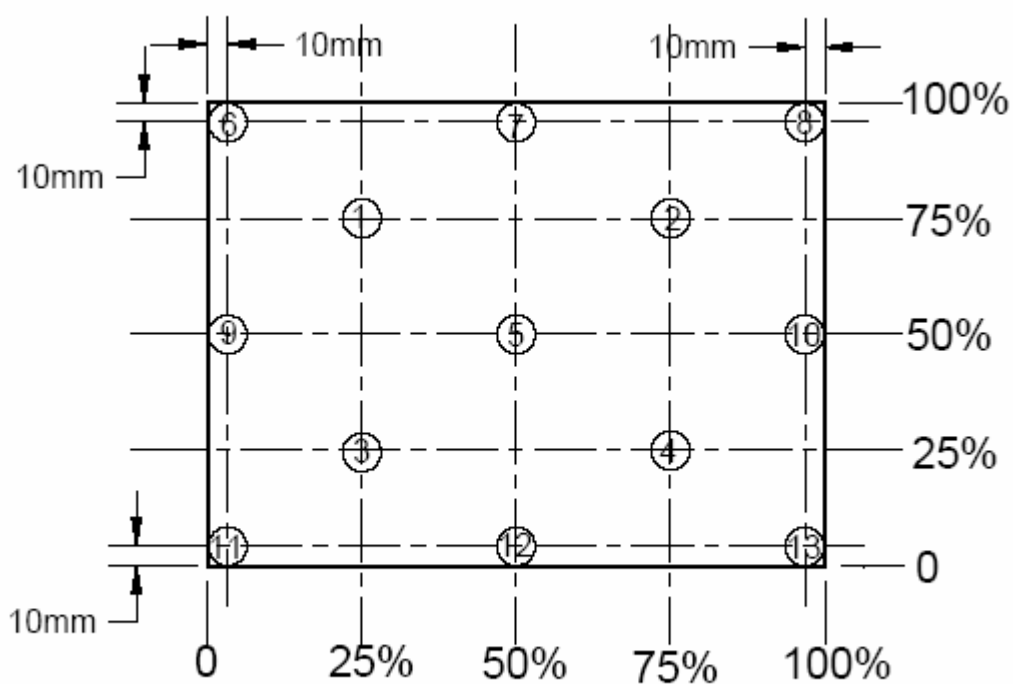
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### F. Definition of Luminance Uniformity(Variation)

Measure the luminance of gray level 63 at 13 points.

$$UNF(13pts) = \frac{\min(L1, L2, \Lambda L13)}{\max(L1, L2, \Lambda L13)}$$

**Figure 6 Measurement Locations of 13 Points**



**Screen Uniformity Measurement Points (13)**



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### 5.0 Backlight Characteristics

#### 5.1 CCFL Connector

**Table 2 Connector Name / Designation**

Manufacturer	JST
Type / Part Number	BHSR-02VS-1 or equivalent
Mating Type / Part Number	SM02B-BHSS-1-TBor equivalent

**Table 3 Signal assignment**

Pin #	Signal Name
1	Lamp High Voltage
2	Lamp Low Voltage

#### 5.2 Parameter Guideline for CCFL Inverter

**Table 4 Parameter guideline for CCFL Inverter**

SYMBOL	PARAMETER	MIN	Design Point	MAX	UNITS	CONDITION
(L63)	White Luminance (Center)	--	200		[cd/m <sup>2</sup> ]	Ta=25[deg C]
ICCFL	CCFL current		6.0		[mA <sub>rms</sub> ]	Ta=25[deg C] (Note A)
FCCFL	CCFL Frequency		50		[kHz]	Ta=25[deg C] (Note B)
VCCFLi	Inverter Ignition Voltage	1320	--		[V <sub>rms</sub> ]	Ta=0[deg C] (Note C)
		1200	--		[V <sub>rms</sub> ]	Ta=25[deg C] (Note C)
VCCFL	CCFL Voltage	590	655	720	[V <sub>rms</sub> ]	@ ICCFL=6mA Ta=25[deg C]
LT	Lamp Life Time	15,000			Hours	(Note E)

Note:

- If it exceeds MIN/MAX values, then "CCFL Life", "ON/OFF Cycle", and "SAFETY" will not be guaranteed.
- CCFL Frequency should be carefully determined to avoid interference between inverter and TFT LCD.
- The voltage over specified value (VCCFLi) should be applied to the lamp more than 1 second after startup. Otherwise, the lamp may not be turned on. The used lamp current is the lamp typical current.



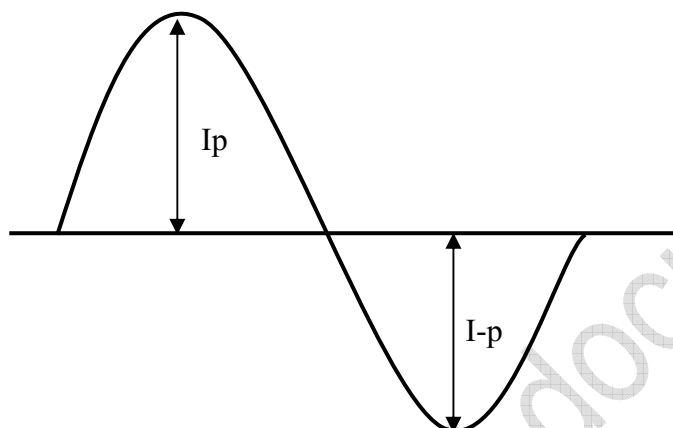
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The inverter kick-off output voltage should be larger than the minimum lamp starting voltage.(Kick-off voltage at  $T_a = 0\text{ }^{\circ}\text{C}$  exceeds minimum value.)

D. The distortion tae of the waveform should be within  $\sqrt{2}\pm 10\%$

The inverter output waveform should be better similar to the ideal sine wave.



$$\text{Asymmetry rate} = |I_p - I-p| / I_{rms} \times 100\%$$

$$\text{Distortion rate} = I_p \text{ (or } I-p) / I_{rms}$$

**Figure 7 Recommendation of Lighting Waveform**

E.  $T_a = 25 \pm 3^{\circ}\text{C}$  and  $ICCFL = 6.0\text{mA}$ , brightness becomes lower than 50% of initial value.



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## 6.0 Electrical Characteristics

### 6.1 Interface Connector

**Table 5 Connector Name / Designation**

Manufacturer	JAE (or equivalent)
Type / Part Number	MDF76LBRW-30S-1H(58) (equivalent to JAE FI-XB30SRL-HF11)
Mating Receptacle/Part Number	JAE FI-X30H(L), JAE FI-X30C*(L), JAE FI-X30M*

**Table 6 Signal pin assignment**

Pin #	Signal Name	Description	Remarks
1	Vss	Ground	
2	Vdd	Power supply 3.3V	
3	Vdd	Power supply 3.3V	
4	V <sub>EEDID</sub>	DDC 3.3V power	
5	Tp	TEST point	
6	CLK <sub>EEDID</sub>	DDC clock	
7	Data <sub>EEDID</sub>	DDC data	
8	Odd Rin 0-	LVDS differential data input	
9	Odd Rin 0+	LVDS differential data input	
10	Vss	Ground	
11	Odd Rin 1-	LVDS differential data input	
12	Odd Rin 1+	LVDS differential data input	
13	Vss	Ground	
14	Odd Rin 2-	LVDS differential data input	
15	Odd Rin 2+	LVDS differential data input	
16	Vss	Ground	
17	Odd Clk in -	LVDS differential clock input	
18	Odd Clk in +	LVDS differential clock input	
19	Vss	Ground	
20	NC	Not connected	
21	NC	Not connected	
22	GND	GND	
23	NC	Not connected	
24	NC	Not connected	
25	GND	GND	
26	NC	Not connected	



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27	NC	Not connected	
28	GND	GND	
29	NC	Not connected	
30	NC	Not connected	

All input signals shall be low or Hi-Z state when VDD is off.

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## 6.2 LVDS Receiver

### 6.2.1 Signal Electrical Characteristics for LVDS Receiver

The built-in LVDS receiver is compatible with (ANSI/TIA/TIA-644 ) standard.

**Table 7 LVDS Receiver Electrical Characteristics**

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Differential Input High Threshold	Vth			+50	mV	Vcm=+1.2V
Differential Input Low Threshold	Vtl	-50			mV	Vcm=+1.2V
Magnitude Differential Input Voltage	Vid	100		600	mV	
Common Mode Voltage	Vcm	Vid /2+0.6	1.2	1.8- Vid /2	V	
Common Mode Voltage Offset	ΔVcm			50	mV	Vcm=+1.2V

Note:

A. Input signals shall be low or Hi-Z state when VDD is off.

B. All electrical characteristics for LVDS signal are defined and shall be measured at the interface connector of LCD.

**Table 8 Timing Requirements**

Parameter	Symbol	Min	Typ	Max	Unit	Conditions	Note
Clock Frequency	Fc	65	71	77	MHz		
Input Data Skew Margin	Trskm	620			ps	Fclk=68MHz	(Figure 11)
		540			ps	Fclk=82MHz	

Note: All values are at VDD=3.3V, Ta=25 degree C.

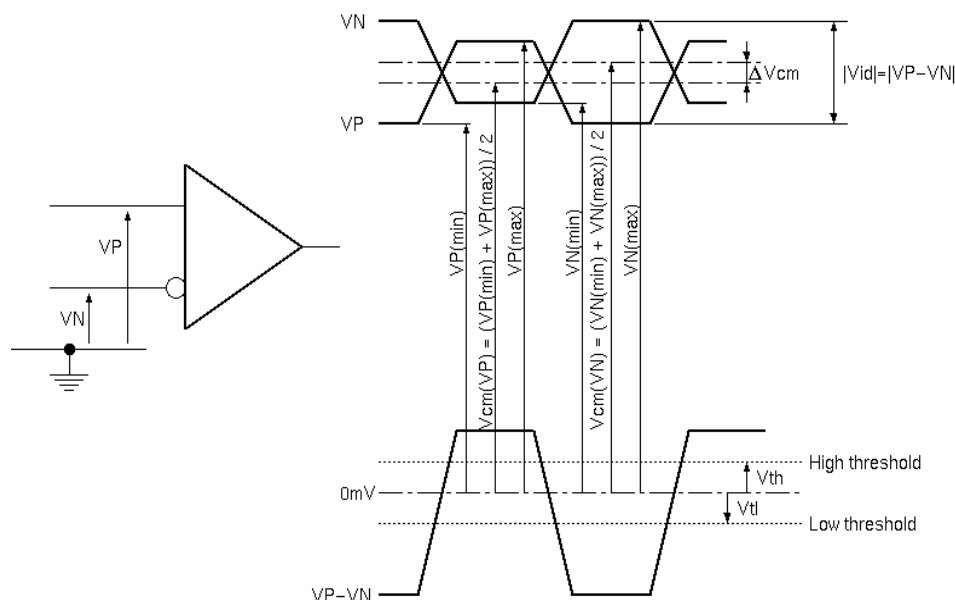




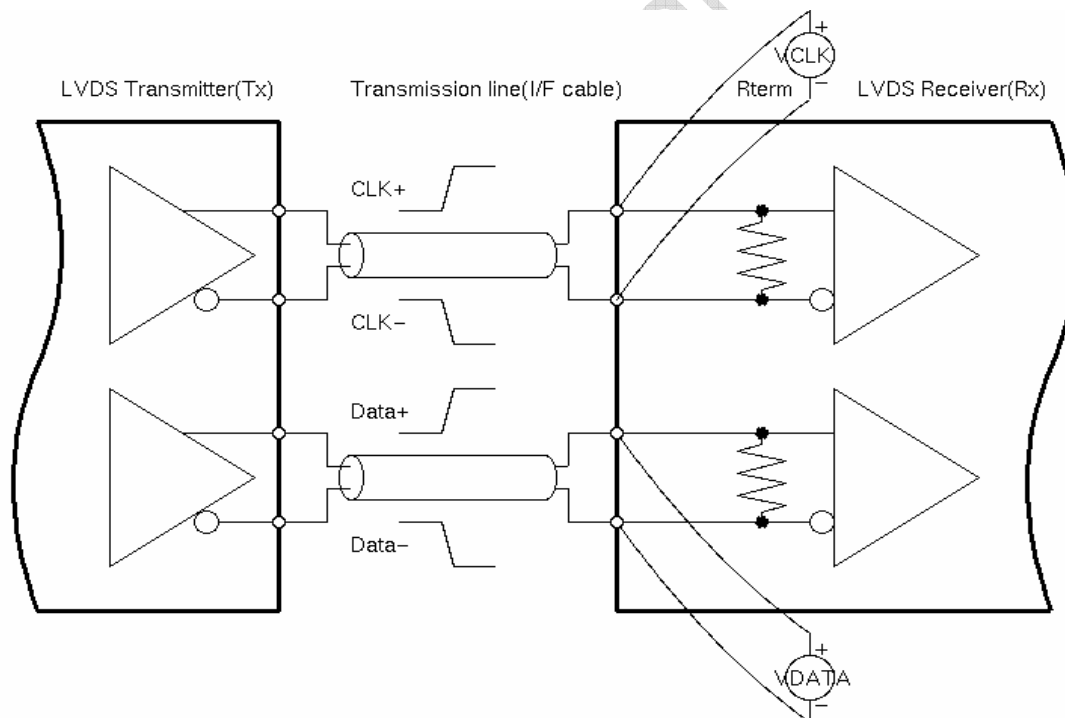
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**Figure 8 Voltage Definitions**



**Figure 9 Measurement System**

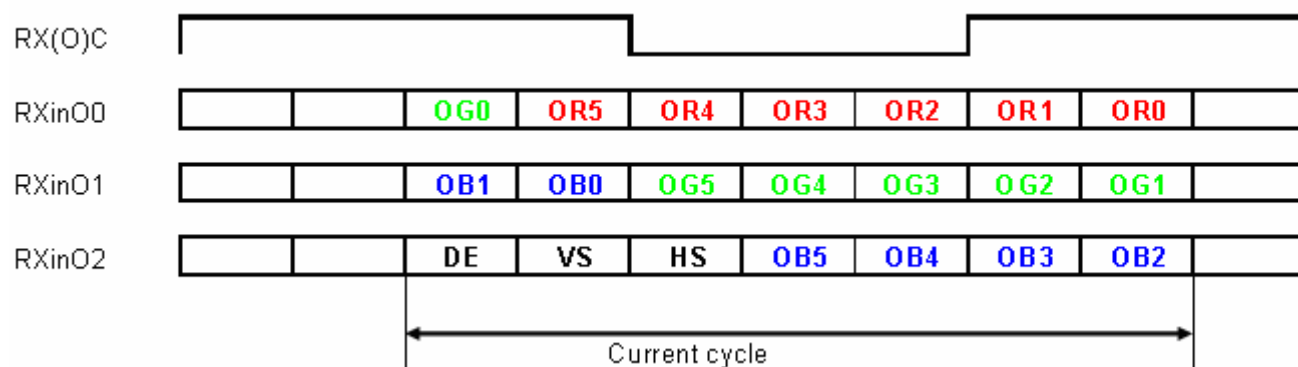




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Figure 10 Data mapping



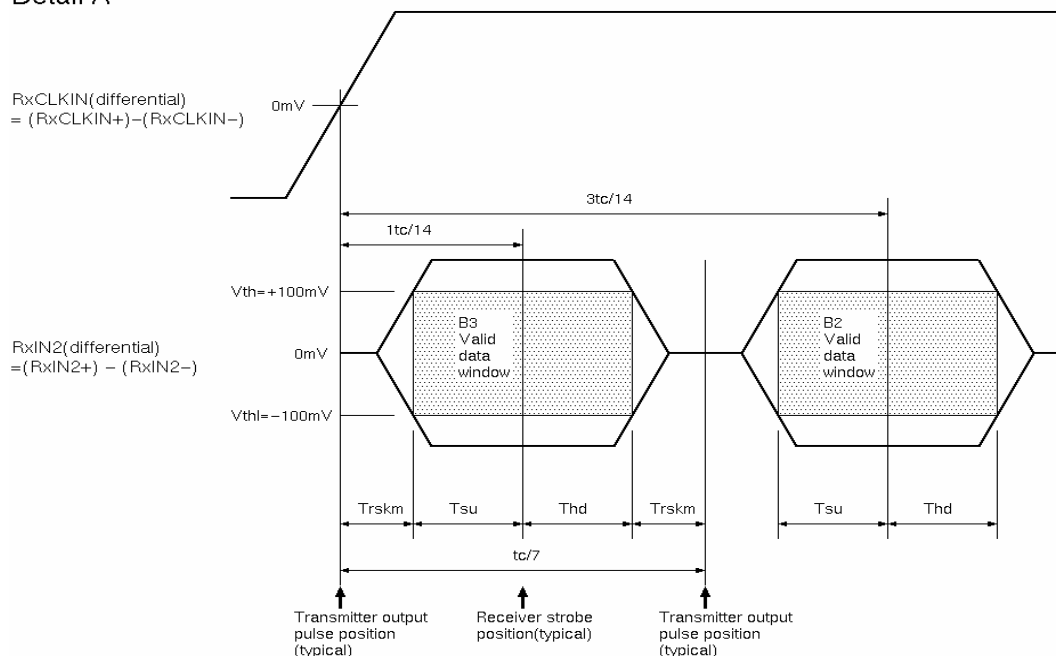


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Figure 11 Timing Definition

Detail A



Note:  $Tsu$  and  $Thd$  is internal data sampling window of receiver.  $Trskm$  is the system skew margin; i.e., the sum of cable skew, source clock jitter, and other inter-symbol interference, shall be less than  $Trskm$ .



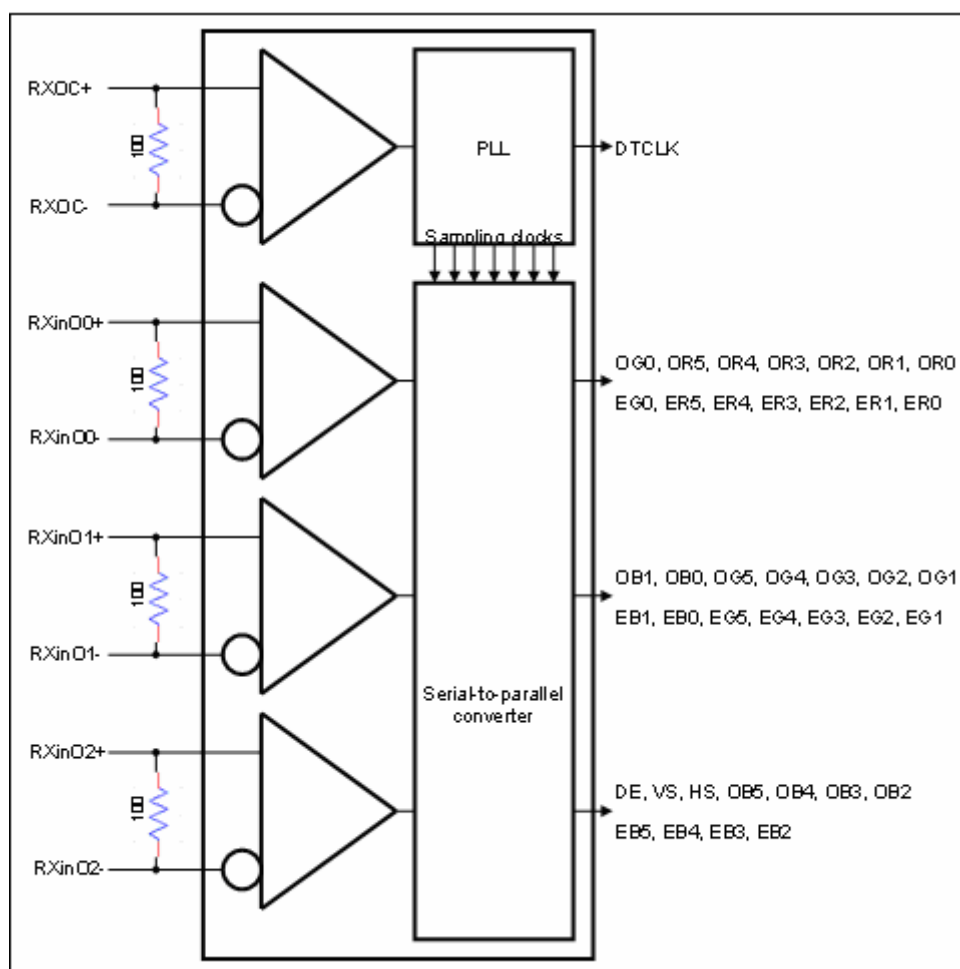
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### 6.2.2 LVDS Receiver Internal Circuit

Figure 12 LVDS Receiver Internal Circuit shows the internal block diagram of the LVDS receiver. This LCD module equips termination resistors for LVDS link.

**Figure 12 LVDS Receiver Internal Circuit**





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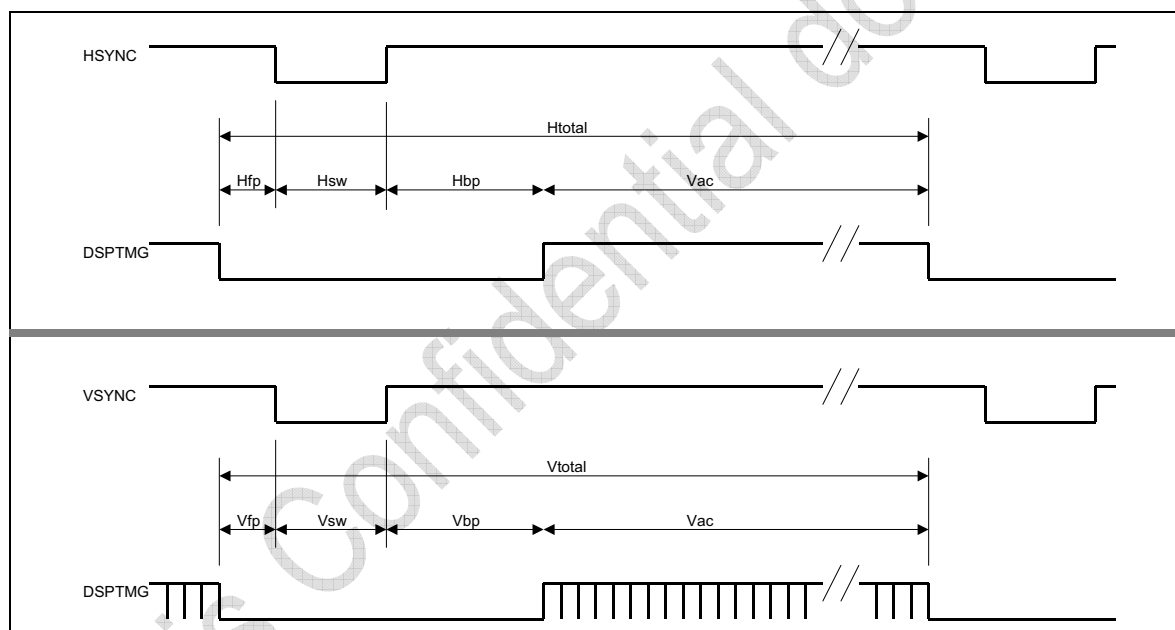
### 7.0 Interface Timings

#### 7.1 Timing Characteristics

Table 9 Interface timings

Parameter	Symbol	Unit	min	typ	Max
LVDS Clock Frequency(single)	Fdck	MHz	65	71	77
H Total Time	Htotal	clocks	-	1440	-
H Active Time	Hac	clocks	1280	1280	1280
V Total Time	Vtotal	lines	-	823	-
V Active Time	Vac	lines	800	800	800
Frame Rate	Vsync	Hz	55	60	65

Figure 13 Timing Characteristics





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## 8.0 Power Consumption

Input power specifications are as follows.

**Table 10 Power consumption**

SYMBOL	PARAMETER	Min	Typ	Max	UNITS	CONDITION
VDD	Logic/LCD Drive Voltage	2.8	3.3	3.8	[V]	
IDD	VDD Current	--	0.27	TBD	[A]	All black pattern, 60Hz
		--	0.36	TBD	[A]	Max pattern, 75Hz
PDD	VDD Power	--	0.89	TBD	[W]	All black pattern, 60Hz
		--	1.19	TBD	[W]	Max pattern, 75Hz
Irush	Rush Current		TBD	TBD	[A]	
VDDrp	Allowable Logic/LCD Drive Ripple Voltage			100	[mVp-p]	



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### 9.0 Power ON/OFF sequence

VDD power, interface signals, and lamp on/off sequence are shown in Figure 14. Signals shall be Hi-Z state or low level when VDD is off.

Figure 14 Power sequence

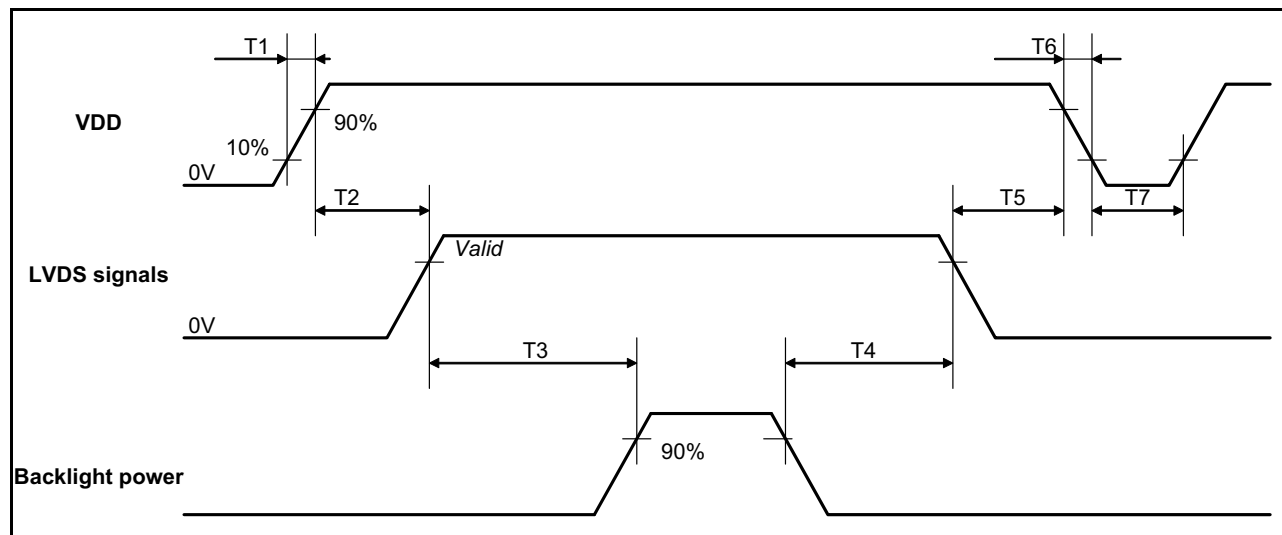


Table 11 Power Sequencing Requirements

Parameter	Symbol	Unit	min	typ	max
VDD Rise Time	T1	ms	0.5	10	
VDD Good to Signal Valid	T2	ms	0	50	
Signal Valid to Backlight On	T3	ms	200	--	
Backlight Off to Signal Disable	T4	ms	200	--	
Signal Disable to Power Down	T5	ms	0	50	
VDD Fall Time	T6	ms	0	10	
Power Off	T7	ms	200	--	

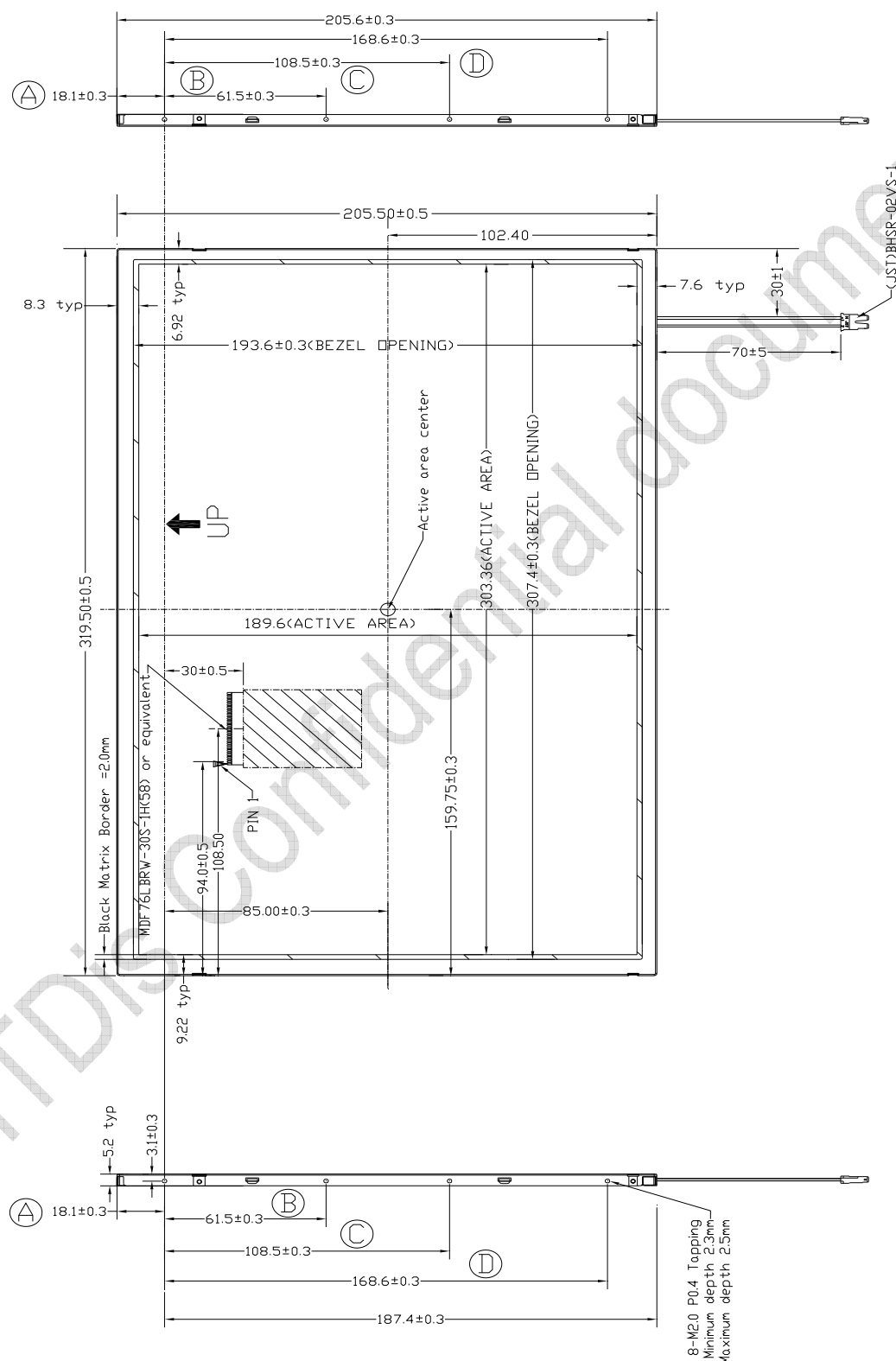


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## 10.0 Mechanical Characteristics

Figure 15 Reference outline drawing (Front side) (follow PSWG Ver3.5)



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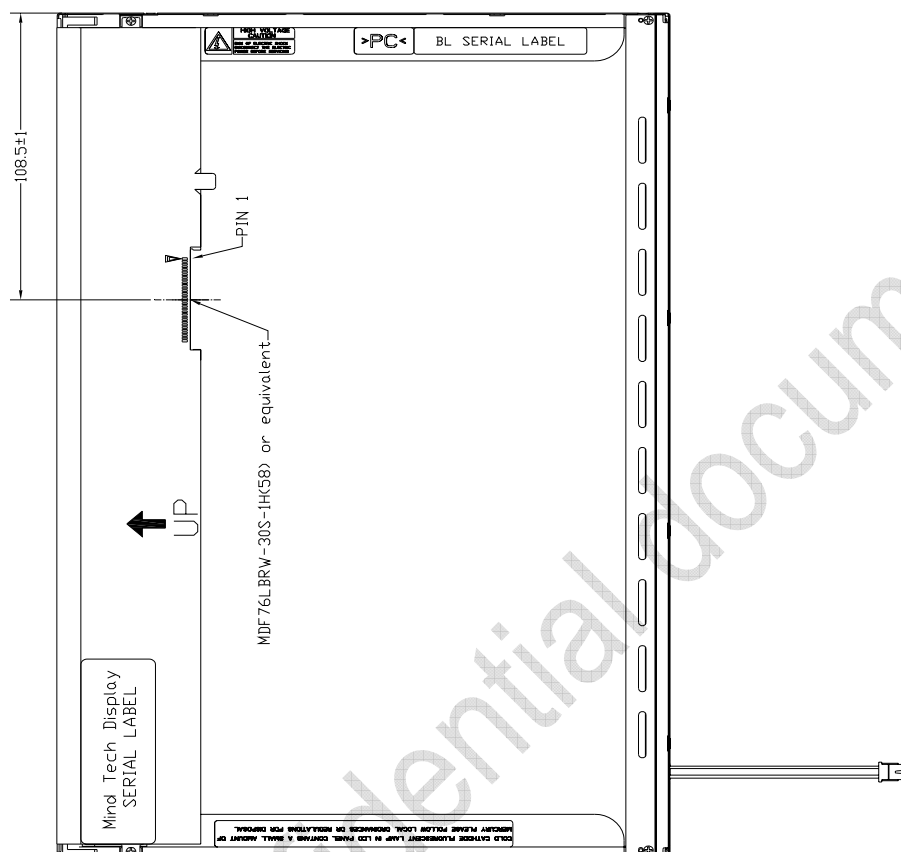




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Figure 16 Reference outline drawing (Back side)





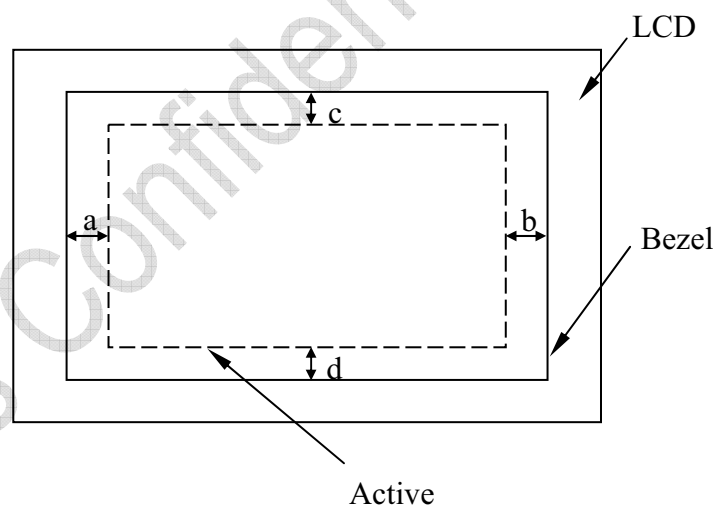
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### 10.1 Dimension Specifications

Table 12 Module Dimension Specifications

Width [mm]		319.5±0.5
Height [mm]		205.5±0.5
Thickness [mm]		5.5(max)
Bezel Opening [mm]	X	307.4±0.3
	Y	193.6±0.3
Mounting Hole [mm]	A	18.1±0.3
	B	61.5±0.3
	C	108.5±0.3
	D	168.6±0.3
Connector position from screen center [mm]	X	
	Y	
CCFL harness length [mm]		
Weight [g]		395g(max)
BM :   a-b   &   c-d		≤ 1.0mm

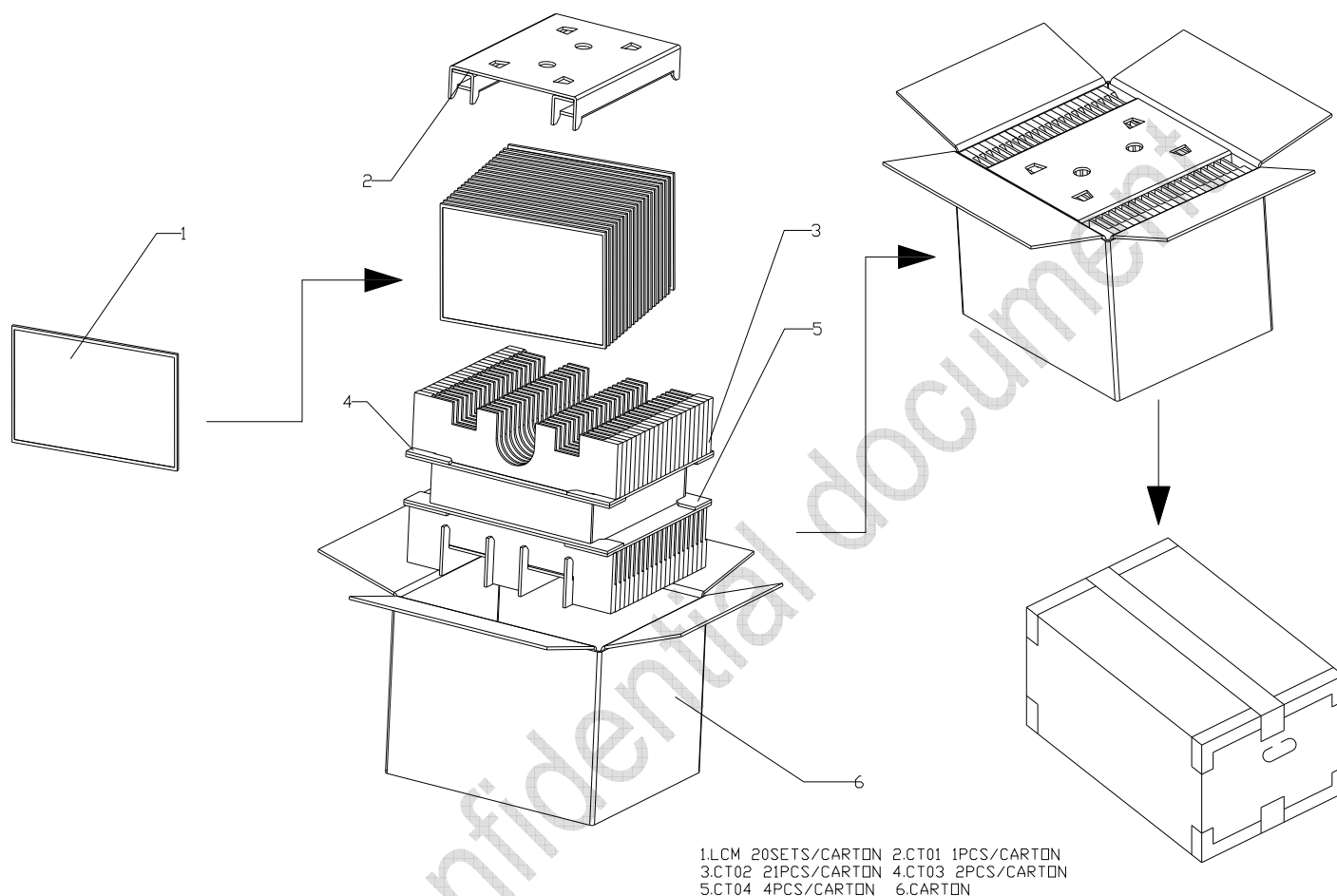




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## 11.0 PACKAGE SPECIFICATION





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**12.0 LOT MARK****12.1 Lot Mark**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

code 1,2,3,6,7,8,9,10,11: MTDis internal flow control code.

code 5: production location.

code 12: production year.

code 13: production month.

code 16,17,18,19,20: serial number.

**Note (1) Production Year**

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Mark	6	7	8	9	A	B	C	D	F	G

**Note (2) Production Month**

Month	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct	Nov.	Dec.
Mark	1	2	3	4	5	6	7	8	9	A	B	C



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## 13.0 GENERAL PRECAUTION

### 13.1 Use Restriction

This product is not authorized for use in life supporting systems, aircraft navigation control systems, military systems and any other application where performance failure could be life-threatening or otherwise catastrophic.

### 13.2 Disassembling or Modification

Do not disassemble or modify the module. It may damage sensitive parts inside LCD module, and may cause scratches or dust on the display. MTD does not warrant the module, if customers disassemble or modify the module.

### 13.3 Breakage of LCD Panel

13.3.1 If LCD panel is broken and liquid crystal spills out, do not ingest or inhale liquid Crystal, and do not contact liquid crystal with skin.

13.3.2 If liquid crystal contacts mouth or eyes, rinse out with water immediately.

13.3.3 If liquid crystal contacts skin or cloths, wash it off immediately with alcohol and Rinse thoroughly with water.

13.3.4 Handle carefully with chips of glass that may cause injury, when the glass is Broken

### 13.4 Electric Shock

13.4.1 Disconnect power supply before handling LCD module.

13.4.2 Do not pull or fold the CCFL cable.

13.4.3 Do not touch the parts inside LCD modules and the fluorescent lamp's connector Or cables in order to prevent electric shock

### 13.5 Absolute Maximum Ratings and Power Protection Circuit

13.5.1 Do not exceed the absolute maximum rating values, such as the supply voltage variation, input voltage variation, variation in parts' parameters, environmental temperature; etc otherwise LCD module may be damaged.

13.5.2 Please do not leave LCD module in the environment of high humidity and high temperature for a long time.

13.5.3 It's recommended employing protection circuit for power supply.

### 13.6 Operation

13.6.1 Do not touch, push or rub the polarizer with anything harder than HB pencil lead. Use fingerstalls of soft gloves in order to keep clean display quality, when Persons handle the LCD module for incoming inspection or assembly.

13.6.2 When the surface is dusty, please wipe gently with absorbent cotton or other soft Material

13.6.3 Wipe off saliva or water drops as soon as possible. If saliva or water drops Contact with polarizer for a long time, they may causes deformation or color Fading

13.6.4 When cleaning the adhesives, please use absorbent cotton wetted with a little Petroleum benzene or other adequate solvent

### 13.7 Mechanism

Please mount LCD module by using mounting holes arranged in four corners tightly.

### 13.8 Static Electricity

13.8.1 Protection film must remove very slowly from the surface of LCD module to



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Prevent from electrostatic occurrence.

11.8.2 Because LCD module uses CMOS-IC on circuit board and TFT-LCD panel, it is Very weak to electrostatic discharge, Please be careful with electrostatic Discharge

11.8.3 Persons who handle the module should be grounded through adequate methods.

### 13.9 Strong Light Exposure

The module shall not be exposed under strong light such as direct sunlight. Otherwise, Display characteristics may be changed.

### 13.10 Disposal

When disposing LCD module, obey the local environmental regulations.



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## 14.0 EDID data structure

Address (Decimal)	Address (HEX)	Field Name & Comments	Value (HEX)	Value (BIN)	Value (DEC)
0	0	Header	0	00000000	0
1	1		ff	11111111	255
2	2		ff	11111111	255
3	3		ff	11111111	255
4	4		ff	11111111	255
5	5		ff	11111111	255
6	6		ff	11111111	255
7	7		ff	11111111	255
8	8	EISA Manuf. Code LSB ( 3 character ID = MTD)	36	00110110	54
9	9	Compressed ASCII	84	10000100	132
10	0A	Product Code = 01	1	00000001	1
11	0B	hex, LSB first = 00	0	00000000	0
12	0C	32- bit serial #	0	00000000	0
13	0D		0	00000000	0
14	0E		0	00000000	0
15	0F		0	00000000	0
16	10	Week of manufacture	0	00000000	0
17	11	Year of manufacture 2007	11	00010001	17
18	12	EDID Structure Ver # = 1	1	00000001	1
19	13	EDID revision # = 1	1	00000001	1
20	14	Video input definition = Digital input	80	10000000	128
21	15	Max H image size = 303.36 cm	21	00100001	33
22	16	Max V image size = 189.6 cm	15	00010101	21
23	17	Display Gamma = 2.2	78	01111000	120
24	18	Feature support (DPMS) = Active off, RGB color	A	00001010	10
25	19	Red/Green Low bits (RxRy/GxGy)	CF	11001111	207
26	1A	Blue/White Low bits (BxBY/WxWy)	C0	11000000	192
27	1B	Red X Rx=0.593	97	10010111	151
28	1C	Red Y Ry=0.348	59	01011001	89
29	1D	Green X Gx=0.308	4E	01001110	78
30	1E	Green Y Gy=0.57	91	10010001	145
31	1F	Blue X Bx=0.156	27	00100111	39



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Address	Address	Field Name & Comments	Value	Value	Value
(Decimal)	(HEX)		(HEX)	(BIN)	(DEC)
32	20	Blue Y By=0.129	21	00100001	33
33	21	White X Wx=0.313	50	01010000	80
34	22	White Y Wy=0.329	54	01010100	84
35	23	Established timing 1	0	00000000	0
36	24	Established timing 2 (1280x800 @ 60Hz)	0	00000000	0
37	25	Manufacturer s timings	0	00000000	0
38	26	Standard timing #1 was not used	1	00000001	1
39	27		1	00000001	1
40	28	Standard timing #2 was not used	1	00000001	1
41	29		1	00000001	1
42	2A	Standard timing #3 was not used	1	00000001	1
43	2B		1	00000001	1
44	2C	Standard timing #4 was not used	1	00000001	1
45	2D		1	00000001	1
46	2E	Standard timing #5 was not used	1	00000001	1
47	2F		1	00000001	1
48	30	Standard timing #6 was not used	1	00000001	1
49	31		1	00000001	1
50	32	Standard timing #7 was not used	1	00000001	1
51	33		1	00000001	1
52	34	Standard timing #8 was not used	1	00000001	1
53	35		1	00000001	1
54	36	Detailed timing/monitor descriptor#1	BC	10111100	188
55	37	1280x800 @ 60Hz : Pixel Clock = 71 MHz	1B	00011011	27
56	38	Hor active=1280 pixels	0	00000000	0
57	39	Hor blanking=160 pixels	A0	10100000	160
58	3A	Horizontal Active : Horizontal Blanking	50	01010000	80
59	3B	Vertical active= 800 lines	20	00100000	32
60	3C	Vertical blanking=23 ines	17	00010111	23
61	3D	Vertical Active : Vertical Blanking	30	00110000	48
62	3E	H sync. Offset= 48 pixels	30	00110000	48
63	3F	H sync. Width=32 pixels	20	00100000	32





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Address	Address	Field Name & Comments	Value	Value	Value
(Decimal)	(HEX)		(HEX)	(BIN)	(DEC)
64	40	V sync. Offset= 3 lines	36	00110110	54
65	41	V sync. Width= 6 lines	0	00000000	0
66	42	H image size= 303.36 mm	2F	00101111	47
67	43	V image size = 189.6 mm	BE	10111110	190
68	44	Horizontal & Verical Image Size(303:190)	10	00010000	16
69	45	No Horizontal Border	0	00000000	0
70	46	No Vertical Border	0	00000000	0
71	47	Non- interlaced, Normal display, No stereo, Digital separate sync	18	00011000	24
72	48	Detailed timing/monitor descriptor#2	0	00000000	0
73	49		0	00000000	0
74	4A		0	00000000	0
75	4B		0F	00001111	15
76	4C		0	00000000	0
77	4D		0	00000000	0
78	4E		0	00000000	0
79	4F		0	00000000	0
80	50		0	00000000	0
81	51		0	00000000	0
82	52		0	00000000	0
83	53		0	00000000	0
84	54		0	00000000	0
85	55		0	00000000	0
86	56		0	00000000	0
87	57		0	00000000	0
88	58		0	00000000	0
89	59	Module revision	1	00000001	1
90	5A	Detailed timing/monitor descriptor#3	0	00000000	0
91	5B	Flag	0	00000000	0
92	5C	Flag	0	00000000	0
93	5D	Data Type Tag : Module serial number	FE	11111110	254
94	5E		0	00000000	0
95	5F	Manufacture M	4D	01001101	77



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Address	Address	Field Name & Comments	Value	Value	Value
(Decimal)	(HEX)		(HEX)	(BIN)	(DEC)
96	60	Manufacture I	49	01001001	73
97	61	Manufacture N	4E	01001110	78
98	62	Manufacture D	44	01000100	68
99	63	Manufacture T	54	01010100	84
100	64	Manufacture E	45	01000101	69
101	65	Manufacture C	43	01000011	67
102	66	Manufacture H	48	01001000	72
103	67		0	00000000	0
104	68		0	00000000	0
105	69		0	00000000	0
106	6A		0	00000000	0
107	6B		A	00001010	10
108	6C	Detailed timing/monitor descriptor #4	0	00000000	0
109	6D		0	00000000	0
110	6E	Color LCD	0	00000000	0
111	6F		FE	11111110	254
112	70		0	00000000	0
113	71	Manufacture P/N M	4D	01001101	77
114	72	Manufacture P/N 1	31	00110001	49
115	73	Manufacture P/N 4	34	00110100	52
116	74	Manufacture P/N 1	31	00110001	49
117	75	Manufacture P/N N	4E	01001110	78
118	76	Manufacture P/N W	57	01010111	87
119	77	Manufacture P/N W	57	01010111	87
120	78	Manufacture P/N 1	31	00110001	49
121	79	Manufacture P/N 0	30	00110000	48
122	7A	Manufacture P/N 0	30	00110000	48
123	7B	Manufacture P/N 1	31	00110001	49
124	7C		20	00100000	32
125	7D		20	00100000	32
126	7E	Extension Flag = 00	0	00000000	0
127	7F	Checksum	9A	10011010	154